SECONDARY MATH III
POLYNOMIAL FUNCTIONS
WS 6.6 SOLVING POLYS BY FACTORING

NAME_____
DATE_____
CLASS_____

Solving Polynomial Equations

Factor completely. If the polynomial is not factorable, write *prime*.

1. $7x^2 - 14x$

2. $19x^3 - 38x^2$

3. $21x^3 - 18x^2y + 24xy^2$

4. $8j^3k - 4jk^3 - 7$

5. $a^2 + 7a - 18$

6. $2ak - 6a + k - 3$

7. $b^2 + 8b + 7$

8. $z^2 - 8z - 10$

9. $4f^2 - 64$

10. $d^2 - 12d + 36$

11. $9x^2 + 25$

12. $y^2 + 18y + 81$

13. $n^3 - 125$

14. $m^4 - 1$

Write each expression in quadratic form, if possible.

15. $5x^4 + 2x^2 - 8$

16. $3y^8 - 4y^2 + 3$

17 $100a^6 + a^3$

18. $x^8 + 4x^4 + 9$

19. $12x^4 - 7x^2$

20. $6b^5 + 3b^3 - 1$

Solve each equation.

21. $a^3 - 9a^2 + 14a = 0$

22. $x^3 = 3x^2$

23. $t^4 - 3t^3 - 40t^2 = 0$

24. $b^3 - 8b^2 + 16b = 0$